

5

A class of quaternary ammonium compounds are found to be effective as corrosion inhibitors. These quaternary ammonium compounds may be used alone or in combination with additional components. For example, phosphate esters can be used with the quaternary ammonium compounds. Moreover, thiocarbonyl compounds can also be added to the corrosion inhibitor compositions. These corrosion inhibitors are effective against ferrous metal corrosion, especially under downhole conditions.